WORLD ECONOMIC FORUM

COMMITTED TO IMPROVING THE STATE OF THE WORLD

A Monthly Look at Successful Sustainability Initiatives

Green Light

Creating the Business Case for CITES: A New Finance Mechanism

Global Agenda Council on Governance for Sustainability

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About Green Light
Green Light is a new publication highlighting innovative partnerships and concepts for collaboration which offer solutions at scale from the bottom-up to the world's most pressing sustainability challenges.

About the World Economic Forum
The World Economic Forum is an independent international organization committed to improving the state of the world by engaging business, political, academic and other leaders of society to shape global, regional and industry agendas

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Foreword

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Welcome to the third edition of Green Light, a monthly newsletter from the Global Agenda Council on Governance for Sustainability aimed at highlighting promising ideas and initiatives for achieving economic prosperity while protecting and preserving the environment.

The World Economic Forum established the Council to help identify and promote new ways to serve people and the planet through sustainable development. It also draws on the ideas of other Global Agenda Councils working on such related issues as food, water, energy, trade, oceans, supply chains and the rule of law.

Worldwide, there is an increasingly urgent need to bring about more prosperity and equality, while preserving a planet threatened by climate change and a host of other environmental challenges. Our goal is not only to share green ideas, especially those based on collaboration and public-private partnerships, but also to inspire people to replicate and even scale up similar initiatives wherever they are.

In this edition of Green Light, we look at how an innovative funding mechanism to foster the development of cutting-edge technologies can help CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) ensure that international trade in wild animals and plants does not threaten their survival.

We hope you enjoy Green Light and that you will find it a source of inspiration for your work.

CITES: 40 Years On

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is one of the oldest environment conventions in the world. Signed in 1973, the agreement at the time was hailed as a ground-breaking model of international cooperation to promote and enable the sustainable coexistence of people and wildlife.

Since the convention came into being, the global population has grown from 4 billion to 7 billion, creating changing consumption patterns and an unprecedented and increasing demand for animal and plant products – from food, clothes and medicine, to high-fashion items, furniture and perfume.

While the world has changed since its establishment 40 years ago, the convention, however, still has one overarching principle that still strongly resonates today – to ensure that the international trade in wild plants and animals does not threaten their survival.

The ability of communities and governments to conserve and to use their natural resources sustainably and the pressures facing plant and animal species in the wild have also greatly increased. The work of CITES is therefore more pressing than ever.

CITES operates throughout the wildlife trade supply chain to protect wildlife from unsustainable exploitation through scientific monitoring, legislation and enforcement, while allowing communities to reap the economic benefits of trading in certain species legally and sustainably. Specifically, CITES regulates the international trade of close to 29,500 plant and 5,500 animal species. Commercial trade in only 3% of these species is banned outright; trade in the rest is strictly controlled but allowed.

CITES has 179 member countries, known as Parties, which adopt national laws to enforce CITES' rules – laws that ban trade in violation of the convention and that allow confiscation of illegally traded specimens. The CITES Secretariat in Geneva helps and advises countries in the complex area of building the capacity and networks to tackle the illegal trafficking of species while ensuring that trade, when allowed, is legal, traceable and sustainable. It also helps to coordinate enforcement at the international level, as well as assisting countries with legislation and science.

CITES Secretary-General John Scanlon highlighted the concrete effects of the convention's work on both wildlife and people:

"Take African cherry bark, for example, which can be turned into prostate medicine. If you strip off all the bark from the tree, it dies. With the International Tropical Timber Organization, we worked in Cameroon with local communities and they now know how to better harvest the bark so the tree lives and the forest lives and they are getting a good and more secure income."

The same techniques of harvesting the bark are now being replicated in other countries to maximize efficiency and create a sustainable income for forest communities.

CITES Appendices

CITES Parties regulate wildlife trade through controls and regulations on species listed in three appendices:

Appendix I contains species that are banned from international trade, except in very specific circumstances. Only about 3% of species fall into this category; included are all the great apes, cheetahs, tigers, snow leopards, most rhinos and elephants (with all commercial trade in rhino horn and elephant ivory being prohibited).

Appendix II covers over 4,460 animal and 28,000 plant species, amounting to some 96% of species regulated by the convention. These species can be traded, but in a strictly regulated manner that requires CITES permits and certificates; these contain, among other things, information on what the species is, its provenance and its destination.

Appendix III covers species already protected by individual countries. By including a species in this category, a country asks potential importing countries to assist it with regulating the trade by requiring export permits.

The CITES Landscape – New Threats and Opportunities

The work of CITES received renewed global media attention recently when evidence was cited of a link between elephant poaching for ivory and the funding of militia and terrorist groups.

Former US Secretary of State Hillary Clinton gave a speech in which she talked of "…growing evidence that the terrorist groups stalking Africa, including Al-Shabaab, with its horrific attack on the mall in Nairobi, fund their terrorist activities to a great extent from ivory trafficking."

In May this year, the United Nations Secretary-General, Ban Ki-moon, told the UN Security Council there was evidence that illegal ivory trade may form an important source of funding for armed groups, including the Lord's Resistance Army (LRA). CITES is also reporting a spike in highly organized poaching being carried out on an almost industrial scale.

"Illegal trade in wildlife is happening at a scale that poses an immediate risk to both wildlife and to people and their livelihoods," said CITES Secretary-General John Scanlon, when giving testimony before the US Senate Foreign Relations Committee in May 2012. "An even greater effort is required, and new approaches need to be taken, if we are to adequately address this risk."

Such approaches, Scanlon noted, include: employing more formidable and coordinated enforcement responses at global, regional, sub-regional and national levels; making better use of modern enforcement techniques and technologies; attracting additional financial and human resources at the national and international level; and suppressing the demand that is driving illegal trade.

Scanlon told Green Light: "The nature of the threat – with the sophisticated weapons and involvement of criminal gangs and rebel militia – is taking out animals en masse. There are high profits to be had, often for low risk."

This is putting not only animal populations in regions such as Central Africa at risk, but also the ecosystems they inhabit, as well as national economies, national and regional security and the jobs and livelihoods of local people.

"Rangers are being killed in the field, officers are being corrupted and local people are being robbed of development opportunities. And the high profits are going to the kingpins, not to local people or those who are being manipulated to be involved in these illicit activities," added Scanlon.

Fighting Back – Traceability through Technology

Technology is at the forefront of fighting back against poachers and smugglers. Recent advances mean that a range of scientific tools, including genetics, morphology, chemistry, pathology and veterinary sciences can now be deployed to examine evidence and help trace specimens to secure convictions when illegally trafficked products are detected.

CITES has achieved a string of notable successes in combatting illegal trade and in bringing overharvested wildlife under its protection and, through collaborative programmes, turning this exploitation into responsibly managed, sustainable trade that benefits people and wildlife.

However, a significant trend has developed in recent years that CITES sees as an opportunity to increase levels of monitoring and control of the legal trade in wildlife, while simultaneously squeezing the illegal trade.

What is happening is that consumers, and large companies in response to consumers, are demanding a greater degree of satisfaction that wildlife products in trade are sourced legally and sustainably.

“We need better traceability and we’re doing a lot of work on this issue,” said Scanlon. “We are working with major fashion houses, for example, on the traceability of python skins, which is a US$ 1 billion-a-year industry. Consumers want a greater degree of assurance that products are legal and properly sourced.”

He added: “We know that local people and species can often benefit from legal and sustainable trade. But this all requires good science and technology. This is where we see a role for a new finance mechanism.”

CTIF – A New Finance Mechanism to Deliver Technological Innovation

CITES Parties are increasingly looking to innovative technologies to help them meet their commitments under the convention. Of particular interest are technologies that can identify species being legally traded, ensure the traceability of those species, monitor them in the wild and assist in sourcing and ageing illegally traded products such as elephant ivory.

John Scanlon explained: "We are basically looking at two sources of finance: private and public. We have reached out to the Global Environment Facility and other public donors. On the private sector side, we have put forward an idea that the private sector could establish a technology and innovation fund and through that fund attract and bring together the investor and entrepreneur to develop technologies that are needed to implement CITES."

The CITES Technology and Innovation Fund (CTIF) concept is based on the premise that for-profit businesses have a unique role to play in advancing CITES goals and that this role is different from the one that governments and NGOs play. A market presence of for-profit companies selling tools and services that improve species research and track legally and illegally traded species in the supply chain would enhance the abilities of the Parties to meet CITES objectives.

Such technologies include nanotechnology, audio recordings, DNA and isotope testing, marking techniques and surveillance systems such as drones, all which can be used to track products that are legally traded as well as identify products that are being illegally traded; they can also be used to monitor and help manage species in the wild. CTIF aims to source technologies involved with traceability and those that leverage increasingly commonly used electronic devices, such as smartphones.

"You can envisage technologies on your phone for example that, through a simple App, let you use a photograph of a snakeskin to identify its origin to the relevant authorities," said Scanlon.

CITES believes an immediate need for cutting-edge technologies is at the point of border checks where legal trade can be verified and illegal products seized. Electronic permitting is a technology that can be used to more securely and effectively monitor a wide range of goods in trade, such as timber products, shark products, caviar, snake and alligator skins, and highly valuable vicuña wool.

Although the US$ 50 million fund would be a private sector initiative, the CITES Secretariat could contribute its experience and expertise. CITES is not only a global regulator with compliance powers, such as trade suspensions, it also has a vast network of management and scientific authorities in almost every country that issues trade permits and makes scientific findings.

CITES has also established relationships with multiple stakeholders, including national customs authorities and the World Customs Organization, national enforcement authorities and INTERPOL, the UN Office of Drugs and Crime, the UN Conference on Trade and Development (UNCTAD), the World Bank, the International Trade Centre, the UN Development Programme (UNDP), the UN Environment Programme (UNEP), the International Union for the Conservation of Nature (IUCN), the International Tropical Timber Organization (ITTO), the UN Food and Agriculture Organization (FAO) and many NGOs.

The CTIF could benefit CITES in financial ways as well as in non-financial ones. Fund managers would pay a small share of profits to CITES to support enforcement efforts and signatories of the convention would be assisted in the implementation of CITES through the use of new technology. The fund, through partnerships, joint ventures and collaboration, could also attract considerable interest in environmental causes that exists in the technology sector.

"There is a huge market out there. And there are technologies that can be developed, but the entrepreneur is not always being connected with the investor or the market. So that's what this fund is all about," said Scanlon.

Technology in Action

Technologies offer huge scope within the sector of international wildlife trade and regulatory enforcement. For example, technology that tracks timber in trade is still relatively new, but the importance of its role is increasingly recognized, driven by growing consumer demand for the knowledge that the timber was legally harvested, and sustainably sourced and managed.

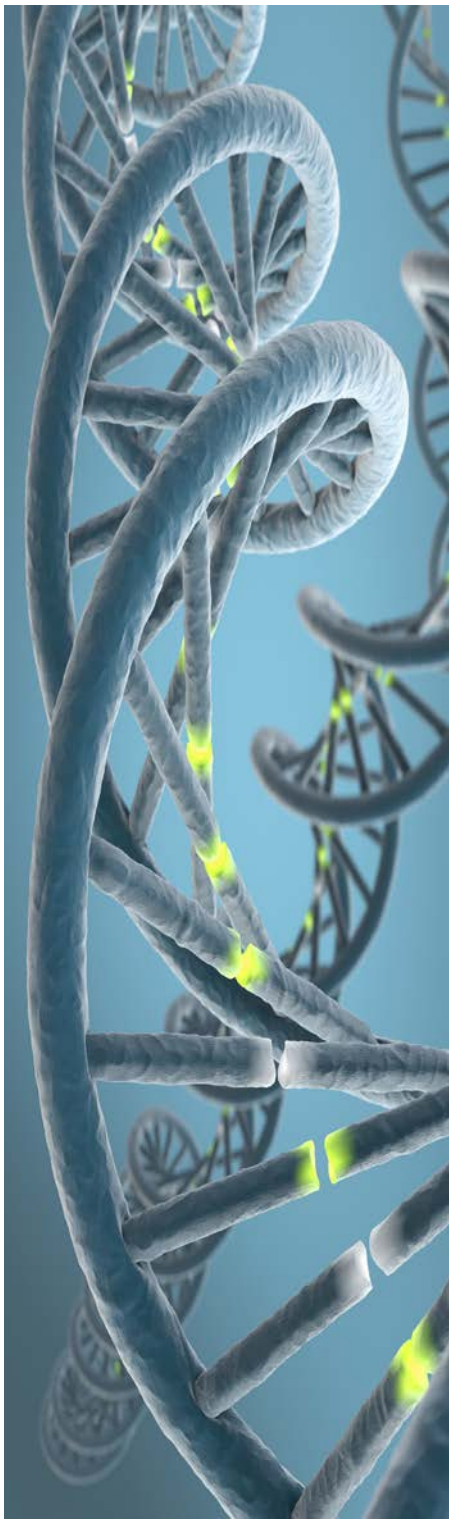
In 1975, CITES listed just 18 tree species; today that number is over 400, the majority of them from tropical countries that face tough challenges in demonstrating the timber has been harvested legally and sustainably.

Technology involved in timber tracking is designed to provide a way to model and record the flow of timber and timber products through the supply chain. At present, technologies vary greatly in sophistication. A system might be little more than paint markings on the wood that are then recorded in a spreadsheet.

Recent developments are more robust, but relatively expensive and require innovative methods to make them affordable and widely available.

These techniques include:

- Radio Frequency Identification (RFID). This is similar to barcoding and offers a way of matching unique timber data with a database; the data is wirelessly transmitted between a tag on the timber and the RFID reader. Unlike several other less sophisticated techniques, RFID is highly resistant to forgery, but currently expensive, needs trained staff, and needs connection to a mobile phone network or the Internet.
- DNA sampling. Uniquely, this identification method does not require any physical tagging of the timber. Instead, genetic information can be taken from a sample of the timber at any stage in the supply chain. DNA can be used in one of two ways. First, it can be compared with genographic charts to establish the timber's place of origin. This requires a database of all species of interest. Second, wood samples can be taken from a tree and, at various control points in the supply chain, from the timber products it has provided to check they match.
- Isotopic sampling. Like DNA sampling, isotopic sampling does not require products to be physically marked. Isotopes found in the soil where a tree grew are analysed and matched with samples taken from the timber product to produce a match. In order for this method to work, isotopes from relevant locations must be sampled, analysed and logged.
- Aerial drones. Controlled by tablet devices, drones can monitor animals and track and record poachers. Some of these drones are already deployed in Kenya's Maasai Mara National Park to protect elephants. Individual animals are fitted with electronic collars that can be detected by the drone. The drones can also be used to frighten herds in order to drive them away from danger and can be adapted to detect heat signals, allowing them to track both animals and poachers at night.



Fast Facts

- CITES was signed by 80 countries on 3 March 1973 in Washington, DC, USA. The convention came into force on 1 July 1975.
- Currently, 179 states are signatories to the convention. Signatory countries adhere voluntarily to the convention's regulations and agree to be bound by them. The convention provides a framework and each country has to adopt legislation to implement CITES at the national level.
- Financing of the CITES Secretariat is entirely from contributions by CITES members to a trust fund administered by the United Nations Environment Programme (UNEP). For the three years 2010 to 2012, the average budget for the CITES Secretariat was US$ 5.5 million.
- 29,500 plant and 5,500 animal species are listed under CITES.
- CITES has over 13,000,000 recorded trade transactions in its databases, a figure that is growing by over 1,000,000 a year.
- Some of the most precious, legally traded wildlife include the US$ 1 billion generated annually through trade in five CITES-listed pythons; the price of a vicuña scarf starts at around US$ 1,000 and one litre of Aquilaria crassa, oil derived from the agarwood tree, is valued at US$ 80,000.
- The illegal wildlife trade is estimated at US$ 5-20 billion annually, excluding timber and marine species; the World Bank estimates that illegal logging in some countries makes up as much as 90% of all logging and produces between US $10-15 billion annually in criminal proceeds.
- Some of the most lucrative illicitly traded wildlife commodities include elephant ivory, rhino horn and some exotic birds and reptiles. One large rhino horn can be sold for as much as US$ 500,000 on the black market and the price per kilo ranges from US$ 20,000 to more than $50,000; more than the price of gold.

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